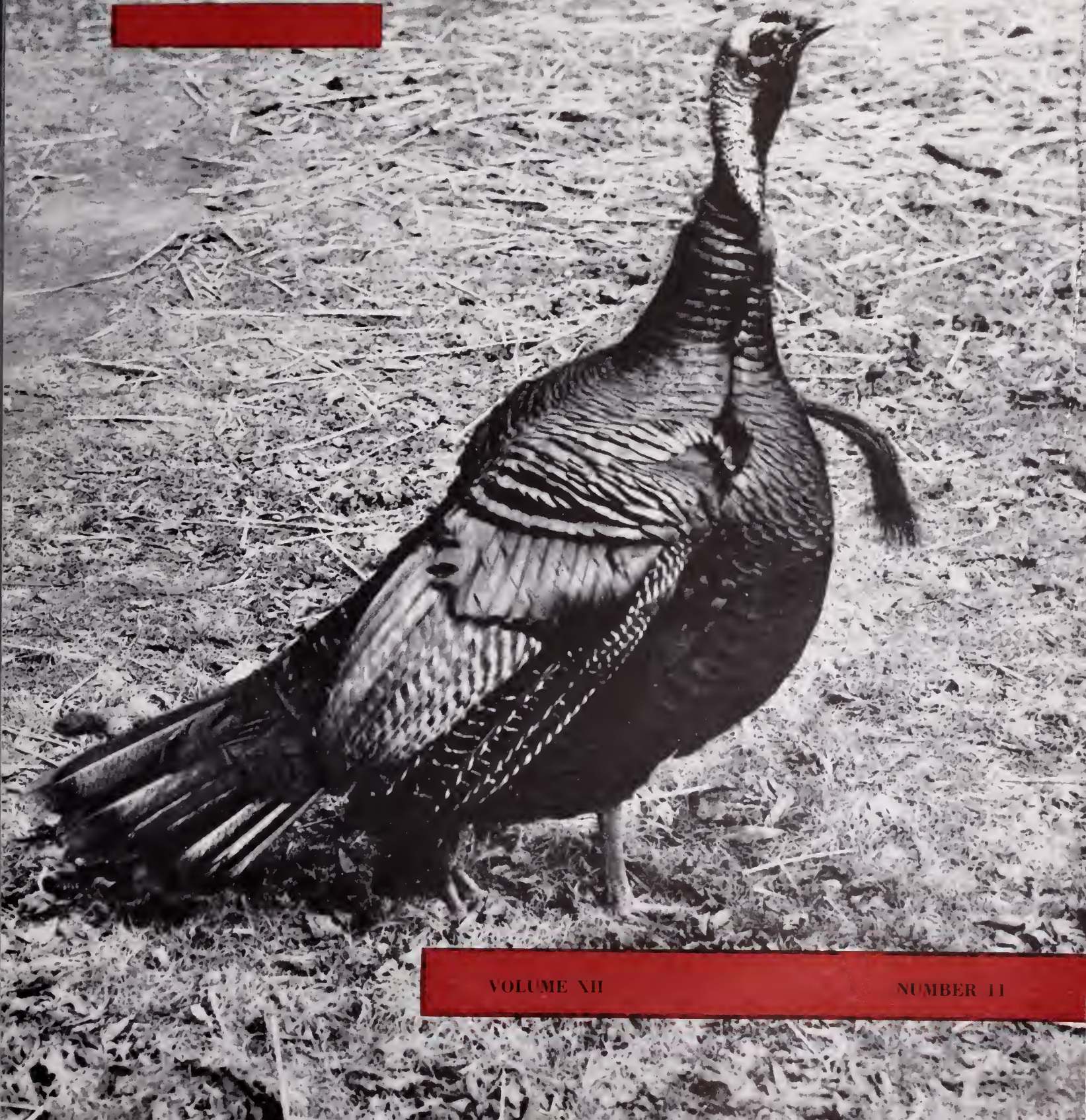


VIRGINIA WILDLIFE

NOVEMBER-1951

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VOLUME VII

NUMBER 11



Commission photo by Kessicoo

QUAIL HAVEN

Two hunters take time out from their quail shooting to examine a nice stand of lespedeza overflowing with seed.

VIRGINIA WILDLIFE

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A Monthly Magazine for Higher Standards of Outdoor Recreation Through Wildlife Conservation

COMMONWEALTH OF VIRGINIA

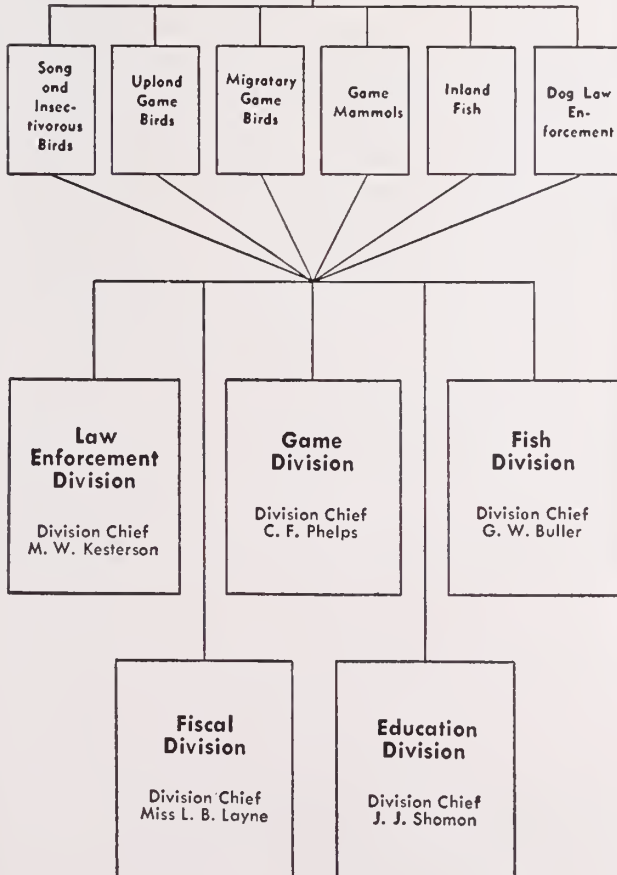


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Cover Photo

An alert wild turkey gobbler proudly displays his royal robe before the eyes of the concealed cameraman.

Commission photo by Kesteloo

VIRGINIA WILDLIFE gratefully receives for consideration all news items, articles, photographs, sketches and other materials which deal with the use, management and study of Virginia's interrelated, renewable natural resources:

WILDLIFE

SOILS — CONSERVE — WATER

FORESTS

Since wildlife is a beneficiary of the work done by State and Federal land-use agencies in Virginia, editorial policy provides for recognition of their accomplishments and solicitation of their contributions. Credit is given on material published. Permission to reprint is granted provided proper credit is given.

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NOVEMBER AGAIN

NOVEMBER is the month of anticipation and, generally, of realization for the vast army of hunters in Virginia. The breath of fall has then arrived, and is seen in the changing foliage from summer garb to red, brown and yellow. Frost glistens on the lowlands in the mornings. The mist rises slowly from the meadows.

Guns have already been cleaned and oiled—equipment repaired and put in order. Impatient quail and turkey dogs that recognize the approaching season, as accurately as their masters, have been conditioned and exercised. Migratory fowl are on the move. Will results from these preparations be successful?

Reports indicate that the breeding season as a whole has been favorable. Quail, due to extensive habitat improvement, should be more abundant in the east. They are making a splendid comeback in the mountains in the west, after near extermination caused by the bitter winters of '46 and '47. Grouse are abundant in a number of our western counties. Turkeys are more than holding their own, as the native stock has been substantially reinforced by liberal restocking. Deer are increasing rapidly in most sections even to a point of over population in a few areas. The longer season on ducks and geese indicates an upward trend.

Previous seasons have been marred by a number of both serious and fatal accidents. The majority have been with the young and inexperienced. These accidents can be eliminated by caution. The education division has used every available method to warn of these dangers. It would be fine if more youngsters could be taken into the fields and woods this fall, by their parents or friends. They could be shown the proper methods of handling firearms, as well as experience the thrill in the rise of a covey of quail, the thunderous take-off of a grouse, or the breathless moment when a turkey gobbler approaches a blind.

In these days of stress and strain, when the future is clouded and uncertain and nerves are frayed, there is no better way of regaining composure and peace of mind than by a rugged day in the field with gun, dog and a congenial companion. If you have any doubt as to the efficacy of this tonic, I suggest that you experiment with it this fall.

—Beverley W. Stras, Jr., Chairman
Commission of Game and Inland Fisheries



CONGRESSMAN FUGATE

A Congressman Looks at Wildlife Conservation in Virginia

Commission photo by Kesteloo

By TOM B. FUGATE

THE FIRST PERMANENT SETTLEMENT in North America was made in 1607 at Jamestown, Virginia. For more than 300 years thereafter we destroyed with complete abandonment the fish of our streams and the wildlife of our fields and forests. The aborigines were restricted to the use of crude fishing gear, bow and arrow and sling, which had not unbalanced nature's ecology. The maintenance of a balance of organisms to their environment is essential to the conservation and propagation of life.

The white man with highly improved fishing gear, traps and explosives, wrought havoc with the fish. To these factors of destruction was added the pollution of the industrial age. Together they did a thorough job of emptying our streams, lakes and bays. All types of firearms were substituted for the bow and arrow. Man used highly trained dogs to locate and chase to death every species of animal and bird. He carelessly and indifferently started fires that burned vast areas, destroying not only wildlife but its food and shelter, with the result that large numbers perished. The programs established and maintained by the farmer for increased agriculture production resulted in more and more land being converted from forest to field. With fewer forests to catch and hold the water during the rainy seasons, more water rushed off, carrying millions of tons of silt to destroy the fish and clog the streams. Pondering man's activities, one wonders how he has escaped from himself.

Following these destructive practices came the soil improvement programs and general distribution

of insecticides. Fortunately for us we saw the devastation wrought by our overt acts and set about to repair the damage.

In 1926 the General Assembly of Virginia by statute established the Commission of Game and Inland Fisheries. The first chairman was the Honorable A. Willis Robertson, who is now the junior Senator of Virginia. He laid a solid foundation for the building of a strong and aggressive organization. He served until 1933 when he took his seat in the Congress of the United States. Carl H. Nolting was then appointed chairman of the Commission and served until July 1942. Judge William S. Snow served from 1942 to July 1944, when Beverley W. Stras, Jr., was appointed and has served the interim period and is the present chairman. M. D. Hart served as executive secretary from 1926 until his death in 1950.

Pursuant to statutory provision, an executive director in the person of Talbott E. Clarke was appointed in 1942. He served until the present director, I. T. Quinn, was appointed in 1946.

It has been my pleasure to know every one of these men. As a member of the General Assembly of 1928-30, I had an opportunity to support the first amendments to the Act. I have watched with ever increasing interest the work of the Commission. Today I know the chiefs of the divisions, supervising wardens, and a large percent of the conservation officers and county wardens, in addition to members of the Commission and the executive director. I do not know of a group in government who is doing a better job. The esprit de corps is



M. D. HART

← Always affectionately known by his many friends as "Mac," Mr. Hart was the father of the present game commission. It was largely through his efforts that the present agency became established in 1916.

Foster Studio photo



BEVERLEY W. STRAS, JR.

← Beverley W. Stras, Jr., was among the first group of Commission members appointed under Governor Byrd to administer the affairs of the Commission. He serves as chairman of the Commission today.

Foster Studio photo

particularly noticeable. The whole organization is alive with an enthusiasm that has been generated by sound and able leadership. I well remember when the salaries were so low that it was difficult to attract able personnel. Public relations have improved. Supplementation of salaries by counties, cities and towns, has brought about better relations.

Today the Commission is composed of experienced and practical professional and businessmen. The chairman is recognized as a highly successful businessman and conservationist who has rendered valuable service to the cause of wildlife conservation. The divisions are headed by able technicians. The field force is composed of capable men. Many of them are college graduates. Salaries are reasonably adequate. With this type of personnel the quality of service has improved. Long range programs in co-operation with other agencies, both state and federal, have been adopted. Research by specially trained technicians in the habitat of the wildlife indigenous to Virginia is producing material of value in maintaining the proper relationship between food, protection and population.

A program of participation, in which the National Forest and Park Services and the State Forest and Park Services are co-operating with private forest and farm land owners, is providing suitable areas for increasing the population of native wildlife. These areas are becoming increasingly important in conserving the water resources. The importance of having clean and adequate watersheds to provide a uniform flow for the streams is now fully appreciated.

Visiting in New York last year in the area around Ithaca, the site of Cornell University, I was impressed with the protection afforded the wildlife by the practice of leaving wooded strips around each field. This not only served the purpose of protection, but helps in the conservation of water and soil. France has recognized for centuries that uncultivated strips on the slopes were safeguards against depletion.

In the field of conservation education, the Commission has made notable strides in recent years. The first step following the war was to publish an official conservation magazine. Thereupon, on July 1, 1946, the Publication Division brought out its first issue of *Virginia Wildlife*, a monthly magazine devoted to highest standards of outdoor recreation through wildlife conservation. This magazine has enjoyed continued publication since that date. During the interim, many other publications of wildlife education in nature have been published. These include the publication of the book *Mammals of Virginia* by Handley and Patton, the booklets *Virginia's Long Range Wildlife Program*, and *Game Birds, Mammals and Fish of Virginia*, and numerous reprints from *Virginia Wildlife*.

On July 1, 1949, the Commission made several reorganization moves. Among these was the disbandment of the Publication Division and the establishment of an Education Division with designs for expansion of every phase of conservation education work. This program is now well under way and includes considerable expansion in publicity

→
 Senator A. Willis Robertson was the first Commission chairman under the re-organization plan of 1926. He is co-author of the present Pittman - Robertson Act and long-time leader of wildlife conservation.

Foster Studio photo



SENATOR ROBERTSON

→
 I. T. Quinn, the present day executive director of the Commission, was appointed to the position in 1946. He has ably carried the burden, and is highly respected by all that know him.

Foster Studio photo



I. T. QUINN

and publication work, increased paid circulation of *Virginia Wildlife*, improved photographic facilities including operation of a new photographic darkroom, a motion picture film production service, and a special services field program for schools and clubs.

I am of the opinion that education in conservation is one of the "must" needs of the future, and that only an enlightened citizenry acquainted with the importance of wildlife and all of the interrelated resources will bring to the Commonwealth the best and the wisest use of all of our natural wealth.

In the field of law enforcement the Commission feels that only through a most vigorous program of game law enforcement will the Commonwealth's wildlife resources remain secure. Before July 1, 1948, the Commission had inadequate funds to employ sufficient game law enforcement officers to properly enforce the game and fish regulations of the Commonwealth. Since that time, however, additional funds have permitted adequate travel expenses for wardens and the Commission was able to initiate a program of re-classification of all field officers who merited an increase in salary. Additional funds also permitted the employment of more conservation officers, commonly known as the *Flying Squadron*; men to cover the state's "hot" areas needing special law enforcement attention. To increase the efficiency and competence of all of the personnel of the Law Enforcement Division the Commission, in 1949, established a school for wardens at V.P.I. This school went into its third

session last August at V.P.I. Game law enforcement men were given instruction in the Commission's game and fish program, its educational work, general policies, field wildlife restoration program, law enforcement techniques, court procedure, safety with firearms, first aid and many other special courses for law enforcement officers.

The program of education must continue unabated. Only an informed citizenship can cope with the problems constantly arising.

More thought should be given to restriction of dogs during brooding seasons. They do irreparable damage to game birds.

The people have imposed a trust upon the state to set up and maintain an effective program for the common good. Therefore the people should be informed as to what is being done and what is proposed for the future. It is their program, for their benefit, and if given the opportunity they will point the way to the path of progress and success. In this connection, programs featured in co-operation with game and service clubs can be immensely helpful.

The work of the Commission, the staff and the field force is primarily administrative. Almost of equal importance is the program of education. The organ of the Commission, *Virginia Wildlife*, has been and can be most helpful in conditioning the public mind. Every Virginian who knows the true situation is proud of the progress made. Much remains to be done. The work is in competent hands, and we look forward to greater accomplishments.



U. S. Forest Service photo

APPALACHIAN COMEBACK

By M. A. MATTOON*

LIKE A STRONG BACKBONE, the Appalachians extend southward from New England. They are America's oldest mountains, the home of sturdy people, the sites of some of the newer national forests. How the forests and the people are joined for mutual benefit is the theme of this article.

People first saw the forests in the early days when Britain, Holland, France, and Spain were sending colonists to our eastern seaboard, and intrepid men

like Spottswood, Boone, and Sevier, lured by tales of opportunities in the great valley beyond the mountains, scaled the Blue Ridge and beheld range after range, hills and peaks, as far as the eye could see. It was the domain of the Cherokee, the Seneca, and the Catawba. In the blue haze, the forest, chiefly hardwood, stretched unbroken, with great expanses of oak, chestnut, yellow-poplar, cherry, beech, maple, ash, white pine, hemlock, and, at higher elevations, spruce and fir.

*Reprinted from *Trees*, Yearbook of Agriculture, 1949.

The forests were first used by the men who pushed on through the mountains and into the valley of the Ohio. As the little bands threaded the wilderness trails, some saw their opportunity en route and stayed behind. They made clearings in the rich bottom lands at the forks of streams and reared their families there. Later new homesteads were carved from the wilderness further "up the creek." The population grew, and people tended land, turned out stock and hunted. Villages grew into towns that were built with wood from the forest. The great poplars, pines and oaks, within easy reach of mountain watercourses, were rafted to distant sawmills for use by the growing nation outside this fastness.

The big forest still stood in its silent grandeur, however; so far, there had been only a nibbling at its edges or a little clearing here and there for pasture or a deadening in which to grow corn for the family at the head of a creek. It was an immensely rich timber world that contained the finest hardwood that ever stood; a country of endless beauty, one in which its isolated folk passed on to their descendants of today words and songs, little changed from those of Elizabethan England.

During and after the Civil War, the railroads began to string the little villages together. Railroads crept up the valleys slowly, in search of the almost unlimited supplies of coal. Oil brought them into the Pennsylvania highlands. As the little balloon-stacked engines rocked over the slender rails, the whistle warned of approaching doom. With assured rail shipment to the outside, where an expanding nation demanded and got what it needed, the stage was set for the coming of the big sawmills into the mountains. They came, slowly at first, and then with logging railroads of their own, like locusts. Handsome timber in increasing amounts fell to the ax, but there always seemed to be more. Sawmill towns sprang up in their temporary ugliness, thrived, and vanished as the cutting moved on. Fire raged on the heels of loggers, and devastation over large areas seemed certain. When Europe burst into the horror of warfare in 1914, demands on the forest mounted and reconstruction saw no let-up. So the large sawmills, accompanied by many little sawmills, marched across the face of the remaining Appalachian wilderness, and its big timber disappeared. Today, after the Second World War, a host of little mills is picking up the scraps and eating into thrifty young timber that will be needed in the future.

And the people in this mountain country? Little farms are strung along the stream bottoms and

at the heads of the cheeks. But the country has changed and young folk like to hear tell of the days that were. Most recognize that an enormous forest restoration task is ahead. Not so many realize that it has already been started.

Shortly after the turn of the century, a few far-sighted men in New England and in the south noticed the disappearing forests, the damage to soil and young timber from fire, the effects upon stream flow and the purity of water supplies. They saw that those things were not good. After years of work with an apathetic public, success crowned their efforts, and in 1911 the Congress enacted legislation, making it possible for the federal government to purchase areas of wild lands on the headwaters of the navigable rivers, and the chain of national forests in the Appalachians was born.

Purchase of land has been going on through the years, until now there are about 6 million acres in public ownership under well-organized protection against fire. These acres are managed in such a way that the remaining resources can be conserved, improved and made to serve the needs of local people in greater abundance.

This, of course, cannot be done in completeness overnight. It is a long-time task that carries over several generations. Recovery of the damaged soil and the regrowth of the forest takes time, yet, there is much that skilled management can do to guide and aid nature in the restoration process. Even in its depleted condition, the forest can contribute useful products by the removal of some trees, thus improving growing conditions for those left to comprise the new forest. The guiding policy in the management of the timber resource on these national forests, then, is one of improvement, rebuilding the growing stock and attaining maximum production from the soil through wise use.

When the white man first came to this country the forest was in virgin condition. Decay and mortality in old trees offset growth. Immense wealth was stored in the old timber, but the forest produced little. A productive forest is a growing forest, and one in which the trees should be used as they reach maturity. Now that the country is settled and demands for wood are increasing, the new forest must become a wood-producing factory instead of the immense storehouse of timber first seen by pioneers.

Forests are restored by growth. If depletion is to be gradually changed to full production, the drain upon the forest must be less than the growth. In this process the national forest ranger is guided

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The Virginia Society of Ornithology

By **RUSKIN S. FREER**

(Commission photos by Kesteloo)

THE FACT that Virginia has an active group of bird students was brought to the nation's attention in a rather spectacular fashion last spring when wire services and radio networks carried the story of an inadvertent union of forces. The members of the Virginia Society of Ornithology, out for an early morning field trip, were joined by strikers at the Dan River mills at Danville, who thought they were sympathizers. Soon the wailing sirens of squad cars approached, and the police wanted to know about parade permits. Finally the confusion was cleared up, and the several groups returned to their special interests.

The Virginia Society of Ornithology was founded on December 7, 1929, at Lynchburg College in the city of Lynchburg. The organization meeting was called by Dr. J. J. Murray, pastor of the Lexington Presbyterian Church, the late Merriam G. Lewis, then county agent for Rockbridge County, and this writer, at the urging of Mrs. Mary D. Dise of Lynchburg, and the late Miss Katherine Stuart of Alexandria.

Because of apprehensions that this organization would, like previous ones, not survive very long, it was agreed that we would attempt to secure its permanence by three means: annual meetings and field trips, a monthly bulletin and local chapters to be affiliated with the state organization. With the Society now in its twenty-second year and a slow but steady increase in membership, not only have the three original objectives been achieved and maintained, but some additional projects have been successfully carried on. It would seem that the optimism and the determination of the founders and charter members were amply justified.

The most important and satisfactory achievement of the Society has doubtless been the continuous publication of its monthly bulletin, *The Raven*.

Under the very capable and faithful guidance of Dr. J. J. Murray, who has been its editor since its inception, it has interested new people in the work of the Society, afforded a means of exchange of information, and has provided an avenue of publication for many papers of more than state-wide interest. We have a feeling that it has been an inspiration to a number of other state organizations and publications.

The Commission of Game and Inland Fisheries allotted fifty dollars toward getting *The Raven* started and toward organizational expenses. This aid was greatly appreciated and did much toward putting the young Society on a good financial basis. The first issue of *The Raven* appeared in January, 1930.

Any sincere and honest evaluation of the achievements of the Society, through these years, must begin and end with the contributions of Dr. J. J. Murray. His consistently hard work, and his good judgment in developing a comprehensive and well-rounded program of work in Virginia ornithological research, have been an inspiration to all of us. He has indexed *The Raven*, reviewed new books on birds, and compiled annual surveys of Virginia contributions and records in other periodicals on ornithology. He has published many papers in *The Raven* on the birds of special regions of the state. Beginning with the Blue Ridge, of his own

Dr. J. J. Murray has served as the editor of *The Raven* since its inception. He is shown cataloguing one of his many prepared bird skins.





The Commission of Game and Inland Fisheries took the Virginia Society of Ornithology on a bird outing August 11. The trip covered both Wreck and Cobb Islands on Virginia's Eastern Shore.

Rockbridge County, he has greatly extended the range of his work to more distant sections of the state. Middle Mountain in Highland County, White Top Mountain and Mt. Rogers in southwest Virginia, Cobb's Island off the Eastern Shore, Burke's Garden in Tazewell County, Fairy Stone State Park, and the Dismal Swamp are some of the areas studied.

Another contribution from Dr. Murray was a series of papers on the early history of Virginia ornithology, and biographical sketches of Mark Catesby, Percy Evans Freke, Harry Balch Bailey, William Palmer and Wirt Robinson. All of these have appeared in *The Raven*.

At present Dr. Murray is working on a checklist of Virginia birds to appear in permanent printed form. This publication was agreed upon at the last annual meeting of the Society in Danville.

Another project of the Society, for which there was an obvious need, was the study of the birds of the various regions of the state. Numerous papers have appeared, chiefly in *The Raven*, giving the results of this work. Some of these studies are: the work in Montgomery County, begun before the days of the VSO, by Dr. E. A. Smythe, Jr., and ably continued and considerably expanded by Chas. O. Handley, Sr., Chas. O. Handley, Jr., and Ralph M. Brown, in papers published in *The Raven*; the birds of Rockbridge County by Dr. Murray; the birds of Amelia and Brunswick Counties by John B. Lewis; the birds of Lynchburg and surrounding counties by this writer; the birds of Albemarle County by John H. Grey, Jr., and Chas. E. Stevens,

Jr.; and the birds of the Cape Henry region by John H. Grey, Jr.

About 1940 the Society began to sponsor a promotional program for Junior Audubon Clubs, and was fortunate in securing the interest and services of Mrs. J. Frank Key of Buena Vista, long active in state garden club work. Mrs. Key did an excellent piece of work. This was reflected in an increased interest in bird study and conservation among womens' garden clubs throughout the state.

At least five members of the Society have done thesis work for advanced degrees on Virginia birds.

In more recent years older members have been greatly stimulated by the zeal and enthusiasm of a group of younger men, whose accomplishments have been both intensive and extensive in the study of the birds of the Old Dominion. At the University of Virginia, largely under the inspiration of John H. Grey, Jr., Frederick R. Scott, Jr., Chas. E. Stevens, Jr., Kenneth Lawless and Wm. F. Minor, have done a great deal of work, covering almost all sections of the state. For two years Henry M. Stevenson worked around Emory and Henry College.

Many other individuals have been active. The list of their names would be too long to include here. At the present time the Virginia Society of Ornithology has about 250 members. Most of them are active and enthusiastic. They have grand times at their annual meetings and field trips. There is no longer any question as to the future of this growing and vigorous bird organization.

APPALACHIAN COMEBACK

(Continued from page 9)

by the general concept that the trees having the best chance for rapid growth and high value shall be allowed to develop fully. By removing those that are defective, of poor form, or with other undesirable qualities, the trees of the highest quality are aided in their development.

Today, because of early indiscriminate cutting and fire, the forest is not suited to large-scale harvesting operations. The volume of timber to the acre is too light to support the heavy investments necessary to large enterprises. Merchantable timber is scattered and often composed of remnants inaccessible to the big logging jobs of the past. Much of the area is in young timber, in the sapling stage or of pole size. Consequently, sales of timber involve relatively small amounts in each transaction and are directed toward utilizing the remnants of overmature, decadent, old growth for sawlogs and veneer stock. Some are directed toward thinning or improvement-cutting operations in young timber for pulpwood, chemical wood, and other cordwood products. Successful management requires the execution of numerous small sales scattered over wide areas. Fortunately, this fits well into the pattern of local population, both as to location and financial ability.

The result is a system of small sales to many people with limited resources. These people can and prefer to become timber operators, each in his own right, rather than leave the home and work for someone else. Such opportunity is in harmony with the ingrown independence and self-sufficiency of mountain folk. Many of those who live on their native acres, farm during the growing season and cut timber from the forests after the crops are in. Consequently, there is a growing clientele of farmer-loggers, who readily augment their cash income by timber work and still remain near their own firesides.

This interdependence is still further sealed by the fact that the protection of the forest from fire is not only the government's business, but the concern of local residents. They automatically become the core of the fire-control organization. This works for close relationship between the local forest ranger and the people in his district. It is interesting that these purchasers of timber return again and again, and on some ranger districts as many as 500 small sales of timber are made in a single year. Often the ranger has a sizable waiting list. There are 45 ranger districts in the 11 national forests in the Appalachians.

The local small operator of national forest timber is not always a farmer. Many are in the wood-processing business as their major vocation. Some small lumber producers operate one or more small sawmills. Others log ties and mine timbers or cordwood for local markets on a year-round basis. Local residents get much of their fuel wood, from dead material, free of charge from the national forest.

The district ranger knows, from his inventory, the timber areas that need treatment for improvement of the forest. His yearly plan of work includes the sale of the trees on such areas, and it is geared to the needs of his people. Within the allowable annual cut of his district, prescribed by the long-range timber-management plans, the annual sales program forms a large part of his work. While he may have some large sales of timber to the larger operating companies, much of his time and effort is taken up with the making and administration of small sales.

To illustrate the handling of a sale and its place in the local economy, let us consider the case of the owner of a mountain farm that is near the Blue Ridge and almost surrounded by forest. The farmer and his boys had finished their fall work. He had a small sawmill, tractor for power, and a truck. He needed lumber for repair of his buildings. A neighbor had spoken about building a new barn, the big yard in town would take any lumber he could bring in, and a paper mill not far away was buying pulpwood. The farmer had a market for all wood he could harvest. He knew of a patch of old-growth timber a mile above his house on the national forest and of a young stand of pole-sized trees that would make pulpwood.

He went to see the ranger, who consulted his maps and records, and then examined the timber. The ranger saw that some of the older trees were ready to be cut. He laid out the boundary of the timber that could be sold. He selected the trees that should be cut and those that, by reason of thrift and quality, should be left for future growth. Those to be cut were marked, the volume of each was tallied, and the stumpage value was calculated.

Because the amount due the government was less than \$500, no public advertisement was required, and the sale contract was drawn up at once. The farmer elected to pay for the trees in lump sum. He mailed his remittance and signed the contract shortly afterwards. Matters were cleared, so he and the boys could start logging. The timber would not run his mill all winter, but he could keep it

(Continued on page 22)

CONSERVATIONGRAM

Late Wildlife News . . . At A Glance

COMMISSION'S EXHIBIT TAKES SECOND PLACE AT ATLANTIC RURAL EXPOSITION

The Commission of Game and Inland Fisheries' exhibit took second place at the Atlantic Rural Exposition last month.

Last year the Commission's educational type exhibit, which depicted the setup and activities of the Commission, won first prize, and I. T. Quinn was personally presented the silver plaque, by Governor Battle.

This year's exhibit was planned under the direction of J. J. Shomon, chief of education division and was for the most part, constructed by L. C. Kesteloo, chief of the audio-visual section, who was assisted by R. E. Merritt, special services chief, and other members of the staff.

Approximately fifty thousand people visited the exhibit, during its stay at the Richmond fairgrounds, to view the attractive display and to obtain a better picture of the operation of the Game Commission. Countless pieces of literature were distributed to the public throughout the 10 days of the show and numerous requests by farmers for wildlife seeds and plants were recorded for late action.

The Commission's new bird booklet, "Birdlife of Virginia," was in great demand and 880 copies were sold over the counter. One hundred sixty-one wild duck booklets and one hundred sixty-five subscriptions to Virginia Wildlife, likewise were sold during the fair.

Conservation officers, Commission personnel and members of the secretarial staff manned the exhibit and assisted the public with information on the wildlife resources of the state.

COMMISSION REPRESENTED AT HIGHWAY CONFERENCE

The Commission of Game and Inland Fisheries was ably represented at the annual Virginia Highway Conference at Lexington, October 16, by Ned Thornton, assistant chief of the Commission's game division.

Thornton spoke on "What Do Forest and Woodland Roads Mean to Wildlife Management". Last year, for the first time, the Highway Conference included a panel devoted to forestry, wildlife and related problems.

The Highway Conference is jointly sponsored by the Virginia Department of Highways and the Virginia Military Institute.

COMMISSION — FOREST SERVICE SET UP WILDLIFE PROGRAM

The Commission of Game and Inland Fisheries, held a meeting with representatives of the George Washington and the Jefferson National Forests at the Commission office last month. At this meeting a wildlife improvement and management program was set up under the Cooperative National Forest Agreement, between the Commission and the U. S. Forest Service, which was enacted by the General Assembly in 1938.

I. T. Quinn, executive director of the Commission stated that the program will cost the Commission approximately \$150,000 per year, \$8,000 in excess of last years expenditure for this program. The revenue supplied by the Commission will come from Pittman-Robertson funds, which are allocated to the states by the Fish and Wildlife Service, from the funds received from an 11% excise tax placed upon arms and ammunition, to help pay for wildlife restoration, and from revenues derived from the sale of National Forest Stamps.

The Commission's farm game habitat improvement program will be expanded in like proportion as that on the national forests. These funds will come entirely from P. R. money.

FISH AREN'T BEING HARVESTED

Dean Rosebery, assistant chief of the Commission's fish division, reports that his field biologists are finding that fishermen are not taking enough fish from the waters that have been investigated.

Very high populations of bullhead catfish have been found in Fairystone Lake and Albemarle Lake, previously not thought to contain this type of fish. These fish are going unharvested. It is believed that this situation prevails all over the state, but further surveys will be made to verify or disprove it.

The fish division believes that fishermen need to be encouraged to harvest these fish, as they are excellent for eating and provide a good type of sport fishing, as well.



←
Chow. (Right to left)
Wardens Hampton, Lem-
mons, Preston, Harmon,
Yates, Miller and Fender-
son, all line up for early
chow on opening day of
school.

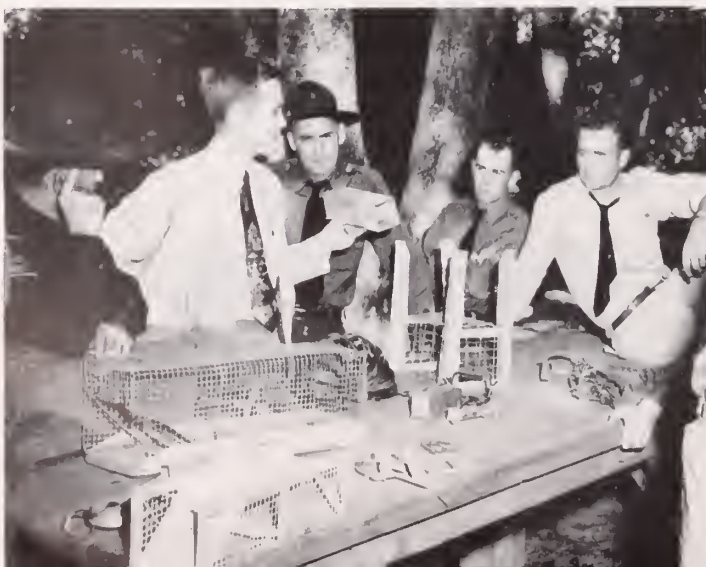


Sheriff Pat Jennings,
Association, gives wa
making



Colonel C. W. Woodson, Jr., Superintendent of the De-
partment of State Police, addresses the game wardens on
law enforcement, and on how to make an arrest.

Dr. H. S. Mosby (second from left) describes
trapping techniques to some of the wardens.



COMMISSION'S WARDENS



I. T. Quinn, executive director
poses with his

The Commission of Game and Inland Fish
last August where they were subjected to one w
by visiting speakers and other Commission po
ing types of instruction the wardens were given

Game technicians, Shaffer and Richards (left to
right) describe Commission's wildlife program.





➔
Dr. I. D. Wilson, Head,
Biology Department at
Virginia Polytechnic In-
stitute at Blacksburg, de-
livers the welcoming ad-
dress at the Warden
School.



President of the Sheriff's
Association gives some pointers on
arrest.



Warden School Commission (in white suit)
with staff of wardens.

GO TO SCHOOL

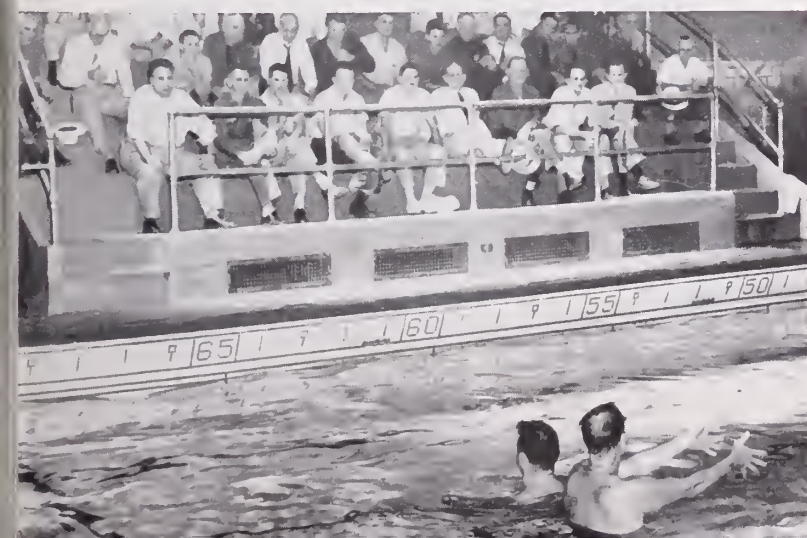
*Commission
photos by
L. G. Kesteloo*

The school took its entire law enforcement staff to school
for a program of intensive instruction and lectures
on crime. Depicted here are some of the outstand-



FIRE. Sgt. Kidd of the State Police (second right)
and Sgt. Birdwell, U. S. Army (second left), instruct
wardens in pistol shooting.

Professor M. B. Blair is seen with his assistant,
teaching life saving techniques to wardens.



Play ball! At the end of each day the wardens
rested up by playing softball.



The ANTLERS of the WHITETAIL

By W. C. NEWMAN

IF YOU EVER want to start a violent argument around the cracker barrel at the country store some winter evening, just mention the fact that a buck deer drops his antlers and grows new ones each year. It is surprising to discover the number of people who do not believe that the buck deer shed their antlers, and many think that the bucks drop only the outer part of them. From our observations on the Virginia state forest we have found that a deer antler is a dead piece of bone and its shape and size can be changed only by shedding and growing an entire new set of horns each year.

The white-tailed or Virginia deer, is probably the best known of the large game animals of America. Not only is it familiar to the sportsmen, but it is well known to the camper, woodsmen, or anyone who has had occasion to spend any length of time in the undeveloped sections of the Eastern United States.

This mammal has played one of the most important roles in the history of our civilization, for it was the principle meat supply of the early settlers. Likewise, buckskin was an important material for garments and the sinews were used as thread. The early Americans learned much about woodcraft while hunting the Virginia deer; and at the expense of the deer, and the squirrel, the continental riflemen learned their marksmanship.

In spite of the inroads of civilization the Virginia deer continues to maintain its numbers, and shows no signs of immediate extermination. This fact is due probably to two factors, the adaptability of

the animal itself, and the wise policies and laws for conservation which most states have adopted.

The white-tail is of great recreational value to the sportsman, and of aesthetic value to a great number of nature lovers.

The bucks usually start shedding their racks about January 1st and continue to approximately March 1st, depending on the vigor of the animal. Undoubtedly, the weather conditions may also have some influence.

During the hunting season of 1949-50 which, incidentally, was a very mild winter, two deer were killed in Cumberland County. Both were in the process of shedding their antlers; one of the bucks

A button buck. Note bumps on forehead.

U. S. Forest Service Photo





By summer time antlers are completely encased in "velvet."



By hunting season the antlers are fully formed, hard and polished.

Commission photos by Tuttle

had already lost one horn and the other one was so nearly ready to drop off that the horns pulled off when the hunter picked up the head after skinning.

In Halifax County during the same year on January 4th, two large bucks were collected, each of which had holes in their heads where antlers should have been.

We who work on the state forest have picked up many antlers. Most of them are found while making clearings around old house sites. Some are found in honeysuckle patches and others are discovered at the base of small saplings. After these antlers have laid on the ground for a few months and the vegetation grows up around them, shading and keeping them moist, they become much softer. Mice and squirrels then begin gnawing on them, probably to obtain the calcium. Practically all of the antlers found show some signs of rodent damage. We very seldom find a complete pair of antlers; usually there is only a single in any one location.

Twice in the last ten years we have picked up antlers within a few hours after they were dropped, even before the butt end had dried. One antler revealed a stain of moist blood showing that the new growth had already started.

In E. T. Seton's book, "*Lives of Game Animals*", the process is described as follows: "Bare ground, with its sprouting of grass and shoots, now supplies bountiful food. The surplus energies of the does goes to the unborn young, while that of the bucks goes to their budding antlers. These make their appearance from two to six weeks after the old ones are dropped. It probably takes as much energy,

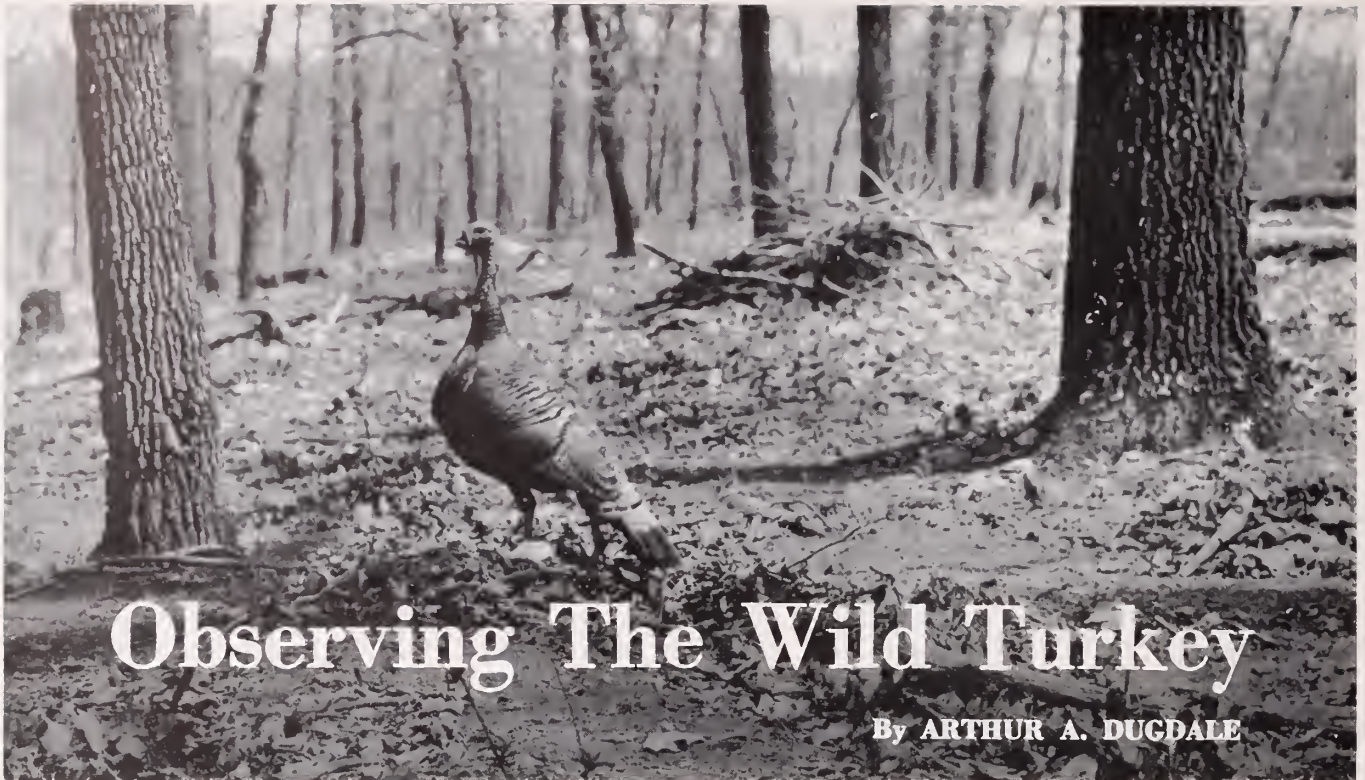
though only half the time, to grow a pair of antlers as to grow a pairs of fawns."

The development of the antlers takes place very rapidly. During the early stages they are soft and almost plastic. Every accident to them is recorded in their shape and this would account for the freak racks that are collected each year by hunters.

By August, or in about four months after budding, the new antlers are completed, although still in the velvet. By September the buck has rubbed them clean of the velvet and polished them by vigorously rubbing bushes and saplings. Usually the trees are killed in the process. One of the favorite trees for such polishing in Cumberland County is the black walnut sapling. In some of the plantings of black walnut throughout the state forest, 90 per cent have been killed by deer rubbing their antlers on them.

After the velvet is removed and the antlers are polished, the bucks are ready for the fights connected with the mating season. In many of our wildlife clearings acres of ground are torn up during this period, indicating that fights for supremacy were carried on among the bucks.

While writing about the bucks' antlers, it might be mentioned that deer do not usually add a point each year, as many people believe. Our observations on the state forests show that you cannot tell a buck's age from the number of points on his rack. The physical condition of the buck, along with the quality and quantity of his food supply, appears to be the factors which determine whether the deer head over your fireplace mantle will be a six or a twelve-point trophy.



Observing The Wild Turkey

By ARTHUR A. DUGDALE

Photo by Prater, U. S. Forest Service

The wild turkey is wide awake, alert and on guard every minute of daylight, ready to use the two means of protection that nature gave it: long legs and strong wings.

MY DEEP INTEREST in the habits of our native wild turkey began when, as a boy, I made friends with an old trapper and fisherman in King and Queen County, Virginia. This remarkable old fellow had hunted and fished along the Mattaponi River for more than half a century. His intimate, first hand knowledge of wild creatures and their habits came from keen observation. Even if he could have read, the nature lore that he knew was not to be found in books. He was a gifted story teller, and every story that he told was full of the ways of wild creatures as he had seen them. Yes, he was my "Uncle Remus", and I often wished that those two people could meet, so I could hear the "tall stories" that were bound to follow!

The wild turkey was my "Uncle Remus'" chief hero and the deep respect that he had for this bird made an indelible impression upon me. The fact that the wild turkey is a combination of contradictions made him all the more interesting to study. For example, he is both stupid and exceedingly cunning, delicate, yet amazingly hardy, lazy and most industrious, proud, yet suffers from an inferiority complex! And if you doubt these facts, you should have asked my "Uncle Remus." He had an eye witness story to prove every point! But in one thing the wild turkey is truly consistent. Always,

every minute that he is awake, he is alert and on guard against danger, ready to use the two means of protection that nature gave him, his long legs and strong wings. If the danger is not imminent, he prefers to run, and his speed is surprising. When he is forced to fly, he flies far enough to get well out of danger, then he lands and runs a considerable distance. However, turkeys that are hunted with dogs soon learn not to light and run, or the dogs will trail them to their hiding place. They will instead fly across a natural barrier such as a river or a ridge, if this is possible. Have you ever wondered why turkeys usually range near rivers?

We said that the wild turkey is stupid, and here's one example. A mother turkey, carrying a brood of young poults, will not hesitate to sail across a narrow creek, stand on the other side and call her trusting babies to a death by drowning! Several will drown before mother turkey decides it's not a good idea, sails back and calls the remaining poults to safety. But for every case of seeming stupidity the wild turkey will display a dozen examples of cunning that approaches reasoning.

Every flock of wild turkeys, regardless of it's size, is ruled by one gobbler, an old tom who has fought his way to this enviable position. The same bird rarely rules the flock longer than a few years. Then he is dethroned by a younger, hardier tom. When

this happens, the deposed gobbler, overcome by humiliation and the effects of his inferiority complex, leaves the flock, and lives the life of a "lone wolf" from that sad day on. During the mating season in the spring, he will indulge in a romance or two, but his days as a regular member of the flock are gone, forever.

When the flock is feeding, working slowly through a body of woods, one bird is not feeding: it is on guard. At the first sound or sight of danger, it warns the flock with one sharp "cut." At this signal, every turkey stops feeding, crouches down and awaits orders. If the tom on guard gives another warning, this time it's two "cuts" in quick succession. That means, "get ready, we're going places!" The leader flies a second or two after the second warning, and the flock is with him, or close behind, headed for the tall timber, or across the river. When the flock is undisturbed, it ranges its territory in somewhat of a general pattern or rough schedule, and some turkey hunters "get onto" and use this time table to good advantage, at the expense of the turkeys.

Here's an interesting thing: a flock of young turkeys usually spends its first winter with a flock of older birds. Usually it's the flock that their mother was raised with. The first winter the young turkeys are schooled in many subjects. Yes, the old birds "talk turkey" to the "young uns" and it lets them live longer! There is much to learn, for after all, a turkey survives by his wits or he

Wild turkey gobblers are thought to be more alert to danger than are the feeding hens.

Commission photo by Kesteloo.



doesn't live very long. What birds, animals and reptiles are his natural enemies and how can he protect himself against them? What insects, seeds, acorns, etc., are good for food and where are they to be found? When a heavy blanket of snow covers the ground, what can they still find to feed upon? You see, there is a lot for young turkeys to learn, so this winter at "finishing school" is most important for their future welfare.

But during the winter with the older flock, the young birds have certain duties to perform for the flock, in addition to their schooling. For example, when this double flock is ready to move from one kind of feeding ground to another, say from the woods in Coon Swamp, into a field that provides sufficient cover as well as food, one and often two young hen turkeys go out first. They fly low over the new feeding grounds and light at the far end of the field. If this scouting party finds that the coast is clear and no danger is in sight, they then run back to where the flock is waiting. When they reach the flock, it feeds out into the new territory. When the flock is feeding, the hen turkeys do most of the scratching. Gobblers have been seen to feed behind a hen turkey, hunting for insects where she has scratched, and occasionally doing a little scratching for himself. The gobblers are more alert to danger while the flock is feeding than are the hens.

We accuse the wild turkey of being delicate, yet amazingly hardy, and this is surely a fact. These great birds can survive almost any weather that comes, blizzards, floods, parching droughts, even severe hail storms. In fact, they often continue feeding during heavy rain storms. An approaching snow storm seems to spur their feeding activities. They will continue to feed until the snow is too deep, even then they look for seeds and berries on shrubs above the ground. Wild grapes that have long since dried and become hard are eaten by wild turkeys when heavy snows make their regular food unobtainable. They can fly and run to the point of exhaustion, yet one night's rest in a tall tree does wonders in restoring their vigor. It is difficult to realize that so rugged a bird is susceptible to most diseases common to their domestic cousins. No, Mother Nature did not fortify them against contracting diseases carried chiefly by man made conditions. The drinking fountains, feed troughs, dirty roosts and poultry houses, those common carriers of disease among turkeys in captivity, could play as much havoc with wild turkeys if they were forced to use them. Surely these aristocratic fowls were not given that incurable roaming habit without

(Continued on page 22)

Virginia's Inland Fish Series

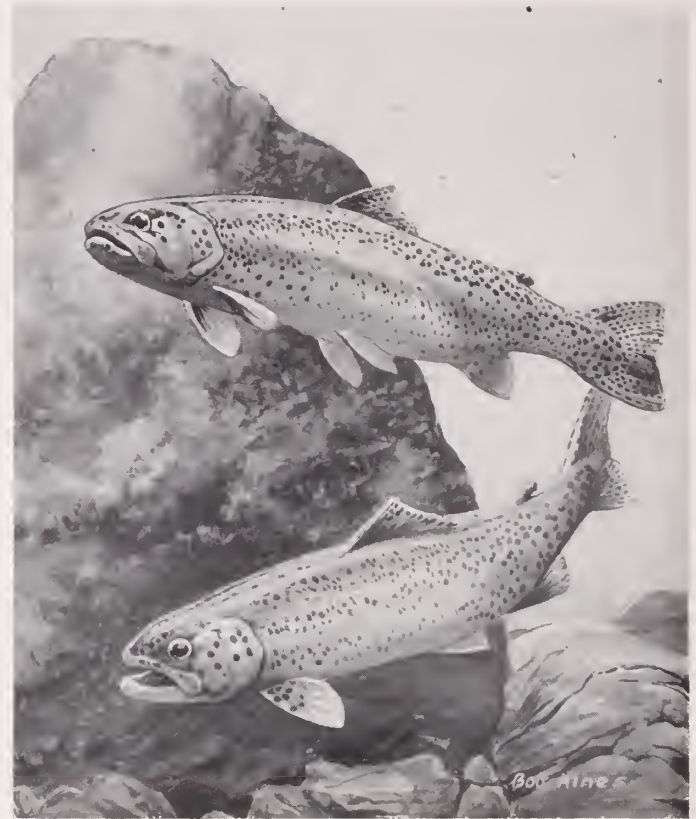
THE RAINBOW TROUT

THE ROBUST RAINBOW TROUT is not only one of the most beautiful members of the trout family, but is also one of the most spectacular and satisfying performers. Its fast, powerful runs interspersed with breath-taking jumps make it a favored individual with veteran trout anglers.

The rainbow trout is not native to any of the eastern waters, but has been successfully introduced all over this part of the United States. The original habitat was from southern California to Alaska. From some streams in other parts of the country, certain members of the family go out to sea and return to the fresh waters bearing the name "steelhead."

In the past, it has been a general custom to call any trout that has migrated to sea a "steelhead." This included cutthroat, Dolly Varden and even eastern brook trout. To remove confusion it is recommended that the term "steelhead" be reserved for rainbows, and rainbows alone, which have migrated to the sea or larger bodies of water. This confusion is not so pronounced here in Virginia, since none of our rainbows go out to sea.

The colors vary from one stream to the other in fresh water. Generally, it displays bluish or olive green above the lateral line, shading into a silvery green on the sides. Sides, tail and dorsal fins are profusely spotted with small dark spots. A wide lateral band of lavender runs along the sides from head to tail. The lower fins are dusky or



whitish. Breeding males are a bright red.

Although the rainbow prefers the larger swift-flowing streams, it does nicely in the smaller streams of the east, provided they have fast water and are not too small. Fish for them at the edge of a strong current and at the head of rapids or under overhanging banks where the current is the swiftest.

Rainbow trout in their natural habitat are early spring spawners, but since being introduced in eastern waters have become fall spawners.

The size of the rainbow depends almost entirely upon the waters from which it is caught. On small streams the average will approximate 1 pound. In larger streams and rivers the average weight will be about 2 to 4 pounds. The world's record comes from the state of Washington, 26½ pounds, 42 inches in length.

The principal foods of the rainbow include insects, crustaceans, worms and smaller fishes.

It is the general belief that the rainbow thrives in warmer and more quiet water than the brook trout, but certain experiences in Virginia have made this assumption doubtful. All trout require water with a dissolved oxygen saturation of at least 8 parts per million in order to survive. With this in mind, let us think before we strip our hillsides of shading timber. Think, before we let our streams become unliveable to this robust beauty that thrives only in the purest of water.

Virginia's Game Bird Series

THE CLAPPER RAIL

THE CLAPPER RAIL, commonly known to hunters as "the salt water marsh hen," is a plump, somewhat chicken-like marsh bird of secretive habits. It is shy and wary, and much more often heard than seen. When flushed, it rises from the reeds close at hand, flies feebly for a short distance with legs dangling, and drops back again into the marsh.

The clapper is found most abundantly in Virginia's two Eastern Shore counties, Northampton and Accomack. A few are also found on the brackish marshes on the western shore of Chesapeake Bay.

This bird of the coastal marshes is sometimes confused with its larger cousin, the king rail, but generally the king rail is found in the fresh water marshes. As a rule, the hen-like appearance, grayish coloration, strong legs, long bill, and white patch under the short tail will identify the clapper.

The clapper rail is a rather large bird, weighing from 12 to 15 ounces, and is surprisingly secretive for its size. Its home is among the grasses and reeds of the salt marshes, where it is seldom seen except at high tides. At this time, it will take wing at the approach of a boat, fly a short distance, and then drop back into the marsh. Its long toes, legs, and slender body permit it to dart among the reeds and hide with ease.

Until recent years the state of Virginia claimed him as a native, local bird—which in reality he is—and made regulations accordingly. A few years ago,



the U. S. Fish and Wildlife Service took over his custody on the grounds that some of them passed back and forth over the Mexican border and were, therefore, migratory.

Breeding from Connecticut south to North Carolina, only small numbers of these rails stay out the winter here in Virginia. Most of them winter farther to the south and return to Virginia about the first of April. The nests are composed of grasses found in the marsh, and the clutch consists of from 8 to 12 brownish white eggs, speckled with brown. The young are glossy black, which soon gives way to the olive gray of the older birds.

The high storm tides of the spring and summer, which destroy their nests and drown the young before they are able to care for themselves, are the most serious natural enemy of these birds. Were it not for the re-nesting habit of the clapper and its high reproductive rate, its numbers would be dangerously reduced during these floods.

Although not a strong flyer, nor an elusive target, the clapper is a bird which even the most amateurish gun handler likes to hunt, for even if you can't hit a quail you can hit a clapper. That is, of course, providing you can find him. This bird is heavily gunned for during the open season, but fortunately can be forced from its cover only during extremely high tides, and these do not occur very often during the open season.

OBSERVING THE WILD TURKEY

(Continued from page 19)

definite purpose. Their very way of life is a barrier to the spread of most diseases in turkeys.

Let's imagine that civilization and short sighted farming practices deprived a flock of wild turkeys of almost all of its natural range, confining it to a small wood-lot containing both food and water, at the same places. Those little sand bars along the creek where turkeys wallow and delouse themselves, if used too often, would in time be transferring lice from one turkey to another! That little strip of lespedeza on the edge of their crowded sanctuary, although it affords enough food for some time, lacks variety. Give a man nothing but chicken to eat for six months and he will dread for meal time to come. Wild turkeys, like humans, *must* have a variety of food. Yes, the choicest spots in their last refuge would soon become harbors for disease and would spread it among them to spell their doom.

It is heartening to realize that Virginians are doing constructive work in conservation. The restocking of wild turkeys in depleted areas by the Commission of Game and Inland Fisheries is an important step in the right direction. My "Uncle Remus" would thoroughly approve of this good work.

APPALACHIAN COMEBACK

(Continued from page 12)

busy with the logs his neighbors brought in from their own lands or had purchased from forest property.

The stand of pole-sized timber had been marked when the ranger was working in the neighborhood. The marking was designed to thin out the area and give the best trees a better chance to grow. He estimated that 100 cords could be cut. The farmer's boys wanted to do it, but the stumpage would cost them about \$200. Because they did not have the money to pay for it all at once, they paid \$50 when they signed the contract and arranged to pay the rest in installments. A hundred cords meant 50 trips for the farm truck to the paper mill, where they got about \$15 a cord.

Sometimes such sales to people in the locality are as small as a single tree, which can be split into shingles to cover a cow shed or a few stringers for a bridge. Sometimes the sales are for a few fence posts, sills, and various farm needs. Again, the sales might be up to five million board feet. For the seven Appalachian national forests from Virginia and Kentucky north, the average size of tim-

ber sales is fewer than 50,000 board feet and less than 60 acres in area.

For a given volume of timber to be cut annually on a sustained-production basis, the cost of administration per thousand board feet is higher when small transactions comprise the annual cutting budget. Nevertheless, the small sale in the Appalachians helps the local people and is useful in the improvement of the forest itself. Much study has been given to techniques and methods of preparing and administering this type of timber sale, to insure good forestry practice at the least cost and still meet the obligations to local forest users.

For example, the scaling of logs or the measurement of cordwood in small amounts, as produced by many small operators scattered over a wide territory, whenever the producer needs such service, take a great deal of time and travel. Through training and practice, forest rangers can accurately measure the amounts of usable products in the standing tree and at the same time mark the trees to be cut.

Timber may be paid for in installments in advance of cutting. This practice is universal for larger sales in order to reduce the part of the purchaser's operating capital tied up in uncut stumpage. For small sales it is practical to require payment for stumpage in a lump sum. This reduces the cost connected with securing large numbers of small payments, and the accounting work connected with them. Sales on a lump sum payment basis are increasing in number, but in making small sales the forest officer takes into account the prospective purchaser's ability to pay.

Throughout the chain of Appalachian national forests, from Maine to Georgia, between 10,000 and 50,000 of these small sales are made annually to local people. The total enterprise is far-reaching in its benefits. It will continue through the years. The contributions to the well-being of many country people and to the stabilization of local industries and communities are substantial. By the same token, those people working with their government, but not for it, observed the gradual reclothing of the devastated slopes of their native mountains and the progress toward restoration of the basic resource that nature placed there in the beginning. They feel that they have a part in the process. No other residents have a greater interest in the control of forest fires, in the rehabilitation of fish and game, or in other associated benefits of well-managed forest property, than those who make all or a part of their living from the products harvested from it.



Marker Honors Virginia Pioneers Killed by Indians

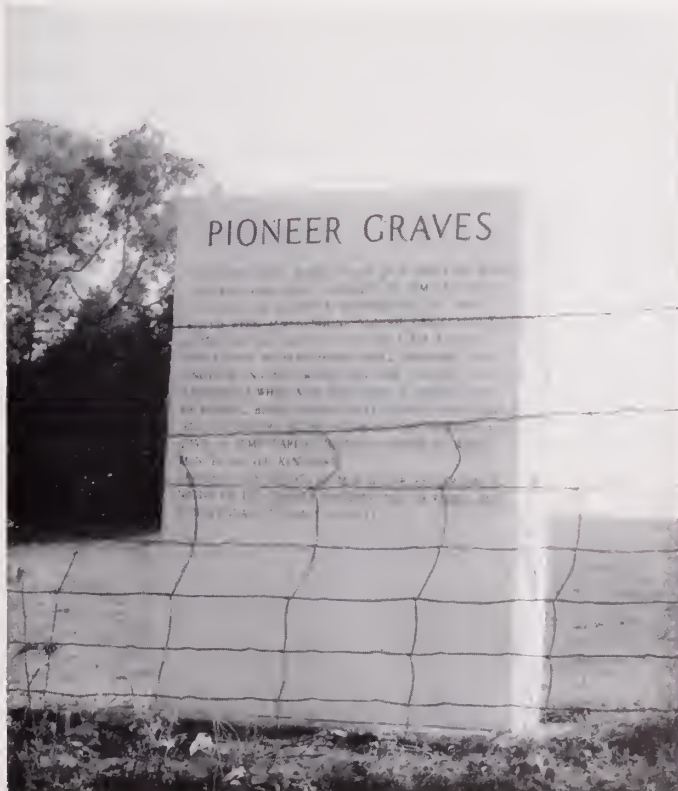
A marker to a band of five Virginia pioneers—including the son of Daniel Boone—who were massacred by Indians as they were about to advance into Kentucky, was dedicated September 22 in Lee County.

M. Wheeler Kesterson, chief of the Commission's law enforcement division, and a descendent of the family of one of the murdered men, contributed the marker, and attended the unveiling ceremony held at the site of the massacre in Lee County.

Mr. Kesterson is a descendent of Mary Russell, daughter of William Russell, whose son, Henry R. Russell, was killed at daybreak on October 10, 1773. Henry R. Russell and James Boone, son of Daniel Boone, were buried where they fell. A negro slave of Russell's known only as "Adam," and Isaac Crabtree escaped when the Indians attacked.

Robert L. Kincaid, president of Lincoln Memorial University, Harrogate, Tennessee, delivered the dedicatory address.

Monument, donated by M. Wheeler Kesterson, to five Virginia Pioneers massacred by Indians.



Blue Jay Has Its Place

Jacob Showalter, from Dale Enterprise, Virginia, reports two very interesting observations which we think may be of interest.

"A pair of blue jays," says Mr. Showalter, "saw fit to build a nest in one of our holly trees this spring.

"I had heard or read that blue jays rob the nests of other birds of their young, but I allowed this pair to raise 4 young from 5 eggs laid.

"One Sunday morning I saw one of the parent birds perched on a dead limb of a peach tree nearby, pounding and pulling at something it was standing on. I thought it was another bird, and after watching for some minutes I decided to see what the blue jay was eating.

"No, it was not a bird—it was a tree frog, all consumed except for the hind legs!

"Later in the season," continues Mr. Showalter, "I saw a brown thrasher on the ground in our garden beating something for quite a while. Upon investigating, I found that the thrasher had killed a little house snake about six inches long. The snake was already minus its head. I have seen small hawks flying with snakes in their claws, but never thought other birds would tackle them."

Trout Eggstripping Completed

G. W. Buller, chief of the Commission's fish division, reports that the Marion trout hatchery, located in Smyth County, finished up its annual stripping of rainbow trout eggs about the middle of October.

The Commission keeps its trout brood stock at the Marion hatchery, where each fall, starting about August, the fish are stripped of their eggs. These eggs in turn are placed in hatching trays, where they hatch in about 30 days, at 52°F. The time of hatching is so dependent upon the temperature of the water, that natural trout-spawn in our streams may go as long as 100 days before they hatch, if the temperature is too low. This lengthy period subjects the eggs to numerous decimating conditions, such as ice, floods and fluctuating water levels, playing havoc with the reproduction.

High temperatures in natural waters also play havoc with the trout reproduction. If the temperature is too high, eggs hatch too quickly, and the spawning trout are weak and undersized, thereby causing a large percentage to die.

How to Eradicate Grass

Dr. Henry Mosby, of the Virginia Cooperative Wildlife Research Unit, sends along the photo showing Bent Medly at Barbours Creek wildlife area, examining ditches approximately eight inches wide and four inches deep, which deer dug while attempting to get at salt which Bent had placed on the flagstone walkway of his home for the purpose of eradicating the grass.

If you will note, these deer came within a few feet of Bent's front door.

This method is not ordinarily recommended by the Commission for the eradication of grass around your home, but we just thought you might like to know how it can be done when everything else fails.



Photo by H. S. Mosby

Bent Medly, at Barbours Creek wildlife area, examines ditches made in his lawn by deer, pawing for salt.

Chuck-Will's Widow Serenades Commission

A striking coincidence occurred in front of the offices of the Game Commission on the date that the Commission's latest publication, "Birdlife of Virginia," was announced as published. A young chuck will's widow, a member of the night hawk family and the bird featured on the inside cover of the August issue of *Virginia Wildlife* was found, perching on the limb of a Tree of Heaven outside of the second floor of the Commission's offices and remained there all afternoon while sales on the bird booklet ran full force.

The bird was discovered by Miss Marion Wooding, secretary in the Game Division, as she glanced outside her office window. Miss Wooding and other personnel of the Commission quickly identified the bird by checking with the color plates appearing in the new publication just out.

The night hawk still remained perched on the limb as the offices of the Commission closed at 5:00 p.m., apparently waiting for dusk to fall so that it could finally move away in the dark on its nightly flight in search of insects.

Squirrel Ranks Second

Sportsmen who take a dim view of squirrel hunting on the basis that it does not provide enough "action" are really passing up a good bet in the field of outdoor sports, according to Gail Evans, advertising and shooting promotion manager of Remington Arms Company, Inc.

"Comparatively few people realize the important part Mr. Bushy Tail plays in the hunter's scheme of things. The squirrel is hunted in almost every section of the country. He is hunted by adult and youngster, and with almost every type of sporting firearm," says Evans. "but he is a hardy, prolific fellow who instinctively prepares himself against food shortages.

"In a survey which embraced the comparative popularity of different game species and the percentage of our sporting ammunition used in hunting each type of game, Remington's statisticians came up with some interesting figures, which place the squirrel the number two target for shotgun shells. These figures do not include the percentage of 22 caliber bullets fired in his direction, but he unquestionably ranks high in that respect.

"Topping the list in shotgun consumption is the cottontail rabbit. More than 29 per cent of the shotgun shells manufactured each year are consumed in hunting this fleet-footed little fellow. Even though more than twice as many shot shells are fired at rabbits than at squirrels, the squirrel ranks second with a percentage of 14, about on a par with the bobwhite quail. I am sure this information will come as a surprise to many sportsmen who decry that the sport of squirrel hunting is not exciting enough. Once they've tried it, they will very likely understand why many hunters find stalking this member of the *Sciuridae* family a fascinating pastime."

NOVEMBER AUTHORS

M. A. MATTOON is assistant regional forester in charge of timber, range, and wildlife management in the Eastern Region of the Forest Service.

W. C. NEWMAN is game manager at the Cumberland State Forest.

ARTHUR A. DUGDALE is a conservation minded citizen from Ashland, Virginia.

RUSKIN S. FREER is professor of biology at Lynchburg College, Lynchburg, Virginia.

TOM B. FUGATE is a member of the U. S. House of Representatives from Virginia's Ninth Congressional District.



DO YOU SEE RED?

For many years authorities on hunting have recommended that gunners who barge forth in the deep woods or heavily foliated covers should wear some RED apparel, such as a cap, coat or neckerchief. This practice has undoubtedly saved a number of lives, but it has not entirely stopped the high-strung, nervous, over-anxious or careless hunter from mistaking a fellow-gunner for a game animal, with disastrous results.

But maybe these accidents were not all due to the fact that the guys at the butt end of the offending guns were trigger-happy. Maybe they were color blind. Dr. Elmer M. Soles, director of the American Optometric Association's department of public information, says that this physical defect can play a considerable part in the safety of hunters.

"Contrary to general belief, a bright color is not the best safeguard against hunting accidents," says Dr. Soles. "because about 140,000 licensed hunters are color blind.

"To be sure you are seen by fellow-hunters, wear a cap or jacket in a bold pattern of black and white. Some part of a hunter's costume should contrast sharply with the mottled visual effect of the autumn landscape. Squares, bold stripes or circles best meet the requirements.

"Color blindness is inherited and is five or six times as common among men as women. Most other visual shortcomings can be corrected." Dr. Soles recommends a visual checkup for all hunters for both safety and success in hunting.

A SHOOTING TIP FOR BEGINNERS

Each fall finds a new "crop" of sportsmen going afield in quest of game birds and animals. Many of these novice hunters will be taking their first trips in the enjoyment of the traditional sport of hunting. More than a few of them will be, figuratively, as "green" as the fields in which they hunt.

Henry P. Davis, public relations manager, Remington Arms Company, Inc., offers some shooting



"This is the safest place for us. . . . They'll be out hunting all day."

tips directed particularly to the beginner. "The beginner," says Davis, "should first acquaint himself with the rules of safe gun handling and make them the leading factor in his conduct afield. The quicker he does this the sooner he will gain the respect and aid of experienced hunters who are always willing to lend a helping hand to a serious-minded novice."

NEW RAT POISON IS SAFE FOR WIDESPREAD USE

Killing rats and house mice with warfarin is one of the safest meth-

ods of rodent control. The U. S. Fish and Wildlife Service, which has issued a leaflet on the use of the compound, points out that warfarin must be taken several times—over a period of five days or more—to cause internal bleeding and death.

Children or pets, who inadvertently pick up a few poisoned baits, will not be harmed. Rodents, however, will take the tasteless and apparently untainted bait for several days in succession, and will die without showing any aversion to the bait, or otherwise "warning" fellow rodents of the danger to them in eating the bait.

TAGGED PACIFIC HALIBUT CAUGHT, WEIGHING 100 POUNDS AT 25 YEARS

The oldest tagged halibut ever caught was landed at Seattle during the summer of 1950. The halibut was tagged in 1935 by an International Fisheries Commission research vessel on one of the halibut banks off the coast of British Columbia. Tagged at an estimated age of 10, the halibut must have been 25 years old when finally landed. The fish weighed 100 pounds when dressed, but was not considered unusually large.

WATERFOWL MAY LIVE SEVERAL DECADES

Waterfowl live much longer than upland game birds. In captivity, European geese and swans have lived 70 or 80 years, and ducks from 15 to 40 years. Wild ducks, geese and swans do not live as long, but wild banded ducks have been reported as old as 18 years, and geese and swans at least 20 years old.



for
Students
Teachers
Parents

Wildlife Ramblings

Why did you become a wildlifer—a forester—a field biologist?

How many times this question is raised to any man who has chosen to devote his life to work with natural resources!

Certainly, it is not the monetary compensation which attracts us to this work, nor the reward of public praise, for both are at a minimum, indeed.

Maybe it's because we are a curious lot, for certainly no field of study offers a more versatile curriculum than the study of nature. We delve into soils, medicine, engineering, forestry, wildlife, chemistry, physics, economics, farming and almost every other field of study.

Perhaps it was the lumber trucks I saw when a youngster, carrying their bulky loads across muddy, barren, stripped-over land where once had stood my favorite squirrel woods. Or could it have been the open pit mines, draining their yellow acid wastes into the once clean and clear mountain stream on whose banks I had spent many happy hours fishing, and enjoying the refreshing coolness of its waters?

We are grown now, but our children are not. Where will they go to swim or fish, now that the streams are polluted? In a shiny new pool perhaps, which we had built to replace that dirty old creek which we, as youngsters, were forced to use—and loved so dearly. Yes, we with all our ingenuity can build a place to swim, but there is something about a natural creek or river, with its non-conformity of side and slope and its water pure and clear, that no man can replace. We can stock it with fish fresh from the hatchery, but there is, in the term "wild," a quality inherent in the creatures born of natural surroundings, which we as humans cannot supplant into any hatchery or pen-raised

animal life.

There are many things which we of the natural sciences miss, and many of them which we strive to bring back. You might say, and I sincerely believe it to be true, that we who work with soils, trees, waters and wildlife are workers with Nature for, truly, we are attempting to have our good earth as she first intended it to be. This does not mean that we cannot cut our trees, for when cut properly and not wantonly stripped,



Watch out for him—he's the one that ran off with your mother last week.

they will continue to reproduce and still hold the soil as they were meant to do. Nor does it mean that we cannot plow our fields, for they were meant to be plowed that they might grow grains, so that we might have food. We can harvest any of our natural, replaceable resources such as trees, grain, water and wildlife, without depleting them to the slightest degree, if we put our heads and hearts to the task.—R.R.B.

Book Reviews

BILLY BASS, by R. W. Eschmeyer. Published by Fisherman Press, Inc., Oxford, Ohio: 47 pp., illus., price \$1.25.

First of a series of true-to-life juvenile stories treating the natural life

history of the black bass. Others to follow.

The text is simple, authoritative, entertaining—good reading for youngsters and adults alike. This may well be the answer to basic education in the field of fish management.

The author is certainly well qualified to tell the story. Dr. Eschmeyer is America's foremost fish scientist and now vice-president of the Sport Fishing Institute of Washington, D. C.

BIRD OF THE MONTH The Goldfinch

How often we are asked, especially in spring, "What are these little yellow birds with black wings?"

Some will answer, "That is the wild canary." Others will say, "We call it the lettuce bird; he eats lettuce seeds." Or still others, "We call him the thistle bird; he eats the thistle seeds, and lines his nest with thistle down." All of this is true; but the books call him the goldfinch.

Yes, it is more yellow than the canary, and as full of song. But its wings and tail are black; and the adult male has a small black cap pulled down close over his eyes. In early spring, when a flock of these birds drops down on your lawn, you can imagine the grass filled with dandelions. If they fly into a tree, that tree seems transformed into a wonderful musical instrument, and every budding leaf seems filled with song.

They are happy, joy-filled birds. They feed together, and sing together, and are so busy making merry that time slips up on them. It is late July or early August before they pair off and go to housekeeping.

If you wish a good study in nature, when you hear that call, "per-chick-o-ree, per-chick-o-ree, per-chick-o-ree," look up, and watch that goldfinch in its up-and-down flight. Does the call come as the bird goes up, or as it goes down?



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FISCAL YEAR

FUNDS RECEIVED	
Hunting licenses	\$675,304
Fishing licenses	378,451
Trapping licenses	8,000
Dog licenses	108,556
Federal aid	197,443
Miscellaneous	16,514
Total of your dollar	\$1,384,268

1950-1951

This is how Your Dollar was spent:

GAME DIVISION

27.70¢

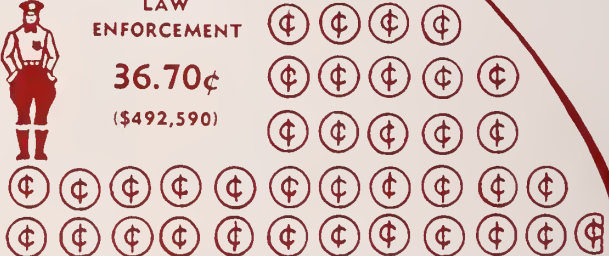
(\$371,908)



LAW ENFORCEMENT

36.70¢

(\$492,590)



CAPITAL OUTLAY

14.33¢

(\$192,325)



FISH DIVISION

11.51¢

(\$154,558)



EDUCATION DIVISION

5.85¢

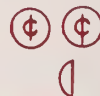
(\$78,470)



ADMINISTRATION

2.26¢

(\$30,401)



FISCAL DIVISION

1.65¢

(\$22,073)



TOTAL EXPENDITURE \$1,342,325

VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES



1951